FIG. 1

GGAGAGACATGCGATTGGTGACCGAGCCGAGCGGACCGAAGGCGCGCCCGA
GATGCAGGTGAGCAAGAGGATGCTGGCGGGGGGCGTGAGGAGCATGCCCAG
CCCCCTCCTGGCCTGCTGGCAGCCCATCCTCCTGCTGGTGCTGGGCTCAGTGC
TGTCAGGCTCGGCCACGGGCTGCCCGCCCCGCTGCGAGTGCTCCGCCCAGGA
CCGCGCTGTGCTGTGCCACCGCAAGCGCTTTGTGGCAGTCCCCGAGGGCATC
CCCACCGAGACGCGCCTGCTGGACCTAGGCAAGAACCGCATCAAAACGCTCA
ACCAGGACGAGTTCGCCAGCTTCCCGCACCTGGAGGAGCTGGAGCTCAACGA
GAACATCGTGAGCGCCGTGGAGCCCGGCGCCTTCAACAACCTCTTCAACCTC
CGGACGCTGGGTCTCCGCAGCAACCGCCTGAAGCTCATCCCGCTAGGCGTCT
TCACTGGCCTCAGCAACCTGACCAAGCTGGACATCAGCGAGAACAAGATTGT
TATCCTACTGGACTACATGTTTCAGGACCTGTACAACCTCAAGTCACTGGAGG
TTGGCGACAATGACCTCGTCTACATCTCTCACCGCGCCTTCAGCGGCCTCAAC
AGCCTGGAGCAGCTGACGCTGGAGAAATGCAACCTGACCTCCATCCCCACCG
AGGCGCTGTCCCACCTGCACGGCCTCATCGTCCTGAGGCTCCGGCACCTCAA
CATCAATGCCATCCGGGACTACTCCTTCAAGAGGCTCTACCGACTCAAGGTCT
TGGAGATCTCCCACTGGCCCTACTTGGACACCATGACACCCAACTGCCTCTAC
GGCCTCAACCTGACGTCCCTGTCCATCACACACTGCAATCTGACCGCTGTGCC
CTACCTGGCCGTCCGCCACCTAGTCTATCTCCGCTTCCTCAACCTCTCCTACA
ACCCCATCAGCACCATTGAGGGCTCCATGTTGCATGAGCTGCTCCGGCTGCA
GGAGATCCAGCTGGTGGGCGGGCAGCTGGCCGTGGTGGAGCCCTATGCCTTC
CGCGGCCTCAACTACCTGCGCGTGCTCAATGTCTCTGGCAACCAGCTGACCA
CACTGGAGGAATCAGTCTTCCACTCGGTGGGCAACCTGGAGACACTCATCCT
GGACTCCAACCCGCTGGCCTGCGACTGTCGGCTCCTGTGGGTGTTCCGGCGCC
GCTGGCGGCTCAACTTCAACCGGCAGCAGCCCACGTGCGCCACGCCCGAGTT
TGTCCAGGGCAAGGAGTTCAAGGACTTCCCTGATGTGCTACTGCCCAACTACT
TCACCTGCCGCCGCGCCCGCATCCGGGACCGCAAGGCCCAGCAGGTGTTTGT
GGACGAGGGCCACACGGTGCAGTTTGTGTGCCGGGCCGATGGCGACCCGCCG
CCCGCCATCCTCTGGCTCTCACCCCGAAAGCACCTGGTCTCAGCCAAGAGCA
ATGGGCGGCTCACAGTCTTCCCTGATGGCACGCTGGAGGTGCGCTACGCCCA
GGTACAGGACAACGGCACGTACCTGTGCATCGCGGCCAACGCGGGCGGCAA
CGACTCCATGCCCGCCCACCTGCATGTGCGCAGCTACTCGCCCGACTGGCCCC
ATCAGCCCAACAAGACCTTCGCTTTCATCTCCAACCAGCCGGGCGAGGGAGA
GGCCAACAGCACCCGCGCCACTGTGCCTTTCCCCTTCGACATCAAGACCCTCA
TCATCGCCACCACCATGGGCTTCATCTCTTTCCTGGGCGTCGTCCTCTTCTGCC
TGGTGCTGCTGTTTCTCTGGAGCCGGGGCAAGGGCAACACAAAGCACAACAT
CGAGATCGAGTATGTGCCCCGAAAGTCGGACGCAGGCATCAGCTCCGCCGAC
GCGCCCCGCAAGTTCAACATGAAGATGATATGAGGCCGGGGCGGGGGGCAG
GGACCCCCGGGCGGCCGGGCAGGGGAAGGGGCCTGGCCGCCACCTGCTCACT
CTCCAGTCCTTCCCACCTCCTCCCTACCCTTCTACACACGTTCTCTTTCTCCCT
CCCGCCTCCGTCCCCTGCTGCCCCCCGCCAGCCCTCACCACCTGCCCTCCTTC
TACCAGGACCTCAGAAGCCCAGACCTGGGGACCCCACCTACACAGGGGCATT
GACAGACTGGAGTTGAAAGCCGACGAACCGACACGCGGCAGAGTCAATAAT
TCAATAAAAAAGTTACGAACTTTCTCTGTAACTTGGGTTTCAATAATTATGGA
TTTTTATGAAAACTTGAAATAATAAAAAGAGAAAAAAACTATTTCCTATAGC

FIG. 1 (continued)

TAGTCGGAATGCAAACTTTTGACGTCCTGATTGCTCCAGGGCCCTCTTCCAAC
TCAGTTTCTTGTTTTTCTCTTCNTCCTNCTCCTCTTCTTCCTCCTTTCTCTTCTCT
TCCCCCAGTGGGGAGGGATCACTCAGGAAAACAGGAAAGGAGGTTCCAGCC
CCACCCACCTGCCCACCCCGCCCCAGGCACCATCAGGAGCAGGCTAGGGGGC
AGGCCTGGGCCCAGCTCCGGGCTGGCTTTTTGCAGGGCGCAGGTGGAGGGGA
CAGGTCTGCCGATGGGGGTGGGAGCCTGTCTGCTGGGCTGCCAGGCGGCACC
ACTGCAAGGGGTGGGAGCCTGGCTCGGGTGTGGCTGAGACTCTGGACAGAGG
CTGGGGTCCTCCTGGGGGACAGCACAGTCAGTGGAGAGAGCCAGGGGCTGG
AGGTGGGGCCCACCCCAGCCTCTGGTCCCAGCTCTGCTGCTCACTTGCTGTGT
GGCCCTCAAGCAGGTCCACTGGCCTCTCTGGGCCTCAGTCTCCACATCTGTAC
AAATGGGAACATTACCCCCTGCCCTGCCTACCTNANAGGGCTGTTNTGAGGN
ATNGATGAGATGATGTATGT

FIG. 2

M L A G G V R S M P S P L L A C W Q P I L L L V L G S V L
S G S A T G C P P R C E C S A Q D R A V L C H R K R F V A
V P E G I P T E T R L L D L G K N R I K T L N Q D E F A S F
P H L E E L E L N E N I V S A V E P G A F N N L F N L R T L
G L R S N R L K L I P L G V F T G L S N L T K L D I S E N K I
V I L L D Y M F Q D L Y N L K S L E V G D N D L V Y I S H R
A F S G L N S L E Q L T L E K C N L T S I P T E A L S H L H
G L I V L R L R H L N I N A I R D Y S F K R L Y R L K V L E I
S H W P Y L D T M T P N C L Y G L N L T S L S I T H C N L T
A V P Y L A V R H L V Y L R F L N L S Y N P I S T I E G S M
L H E L L R L Q E I Q L V G G Q L A V V E P Y A F R G L N Y
L R V L N V S G N Q L T T L E E S V F H S V G N L E T L I L
D S N P L A C D C R L L W V F R R R W R L N F N R Q Q P T
C A T P E F V Q G K E F K D F P D V L L P N Y F T C R R A
R I R D R K A Q Q V F V D E G H T V Q F V C R A D G D P P
P A I L W L S P R K H L V S A K S N G R L T V F P D G T L E
V R Y A Q V Q D N G T Y L C I A A N A G G N D S M P A H L
H V R S Y S P D W P H Q P N K T F A F I S N Q P G E G E A
N S T R A T V P F P F D I K T L I I A T T M G F I S F L G V V
L F C L V L L F L W S R G K G N T K H N I E I E Y V P R K S
D A G I S S A D A P R K F N M K M I

FIG. 3

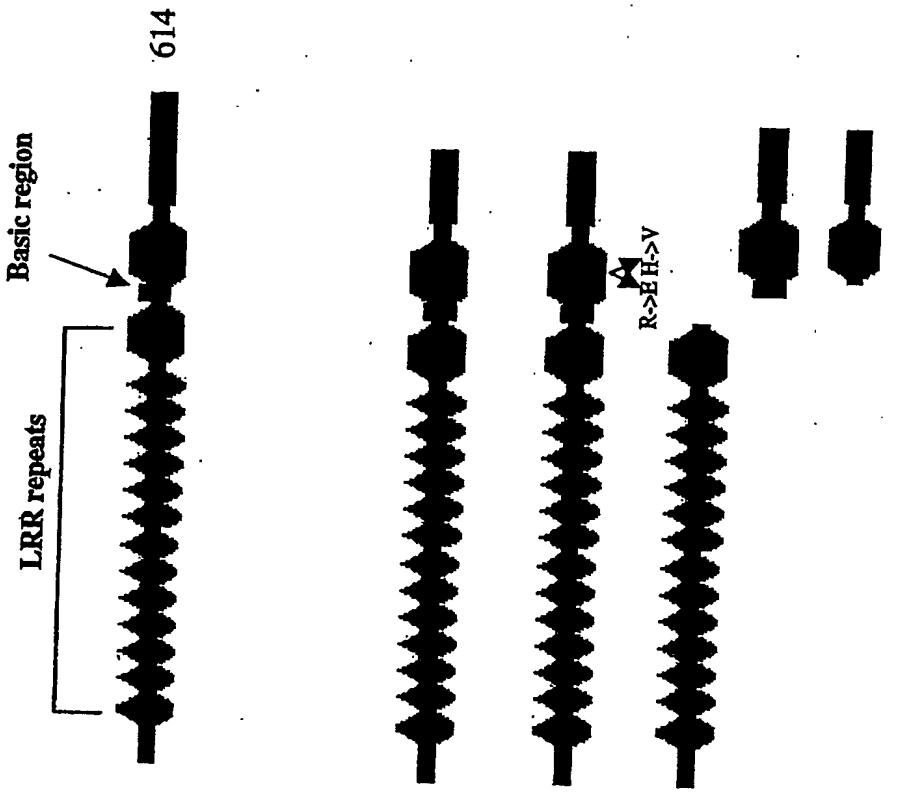

Deletion Construct (amino acids)
EC 50
(34-532)
6 nm
(34-532) mutated
120 nm
(34-416)
120 nm
(417-532)
60 nm
(425-532)
25 nm
614
Basic region
LRR repeats
R->E H->V

FIG. 4

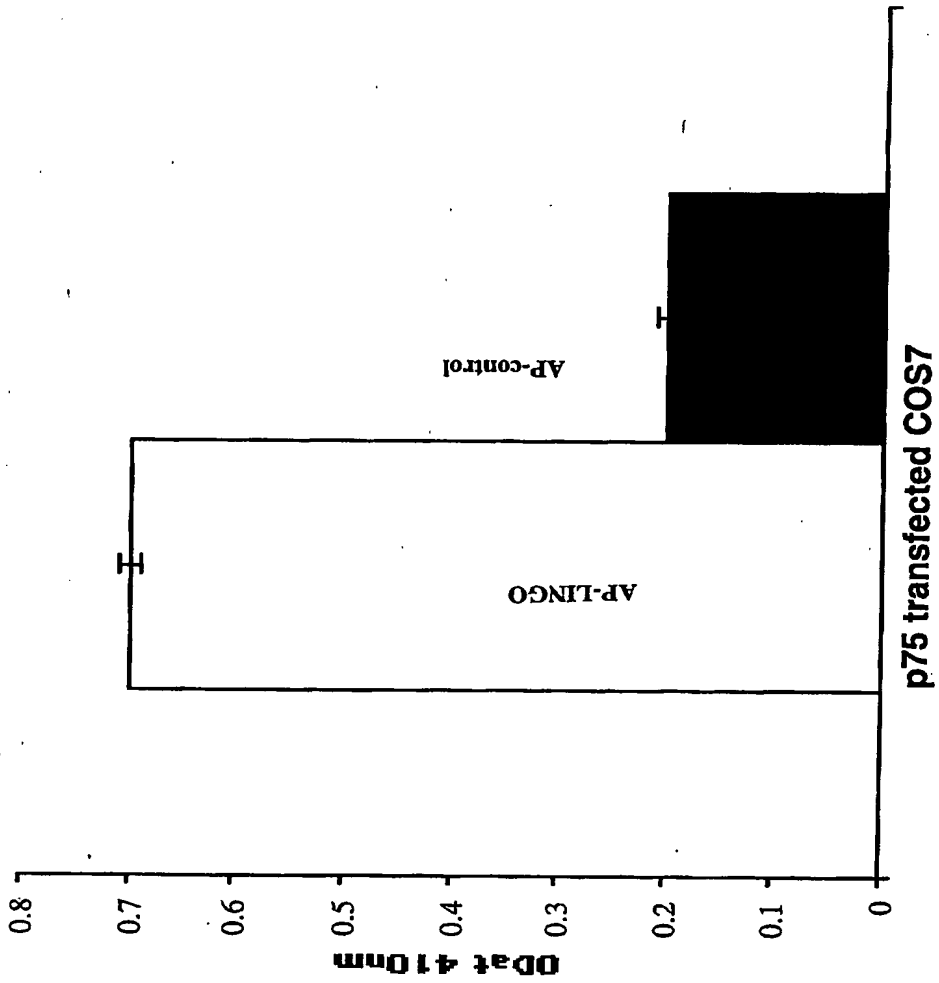

p75 transfected COS7
DDat 41Dmm
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
AP-LINGO
AP-control

FIG. 5

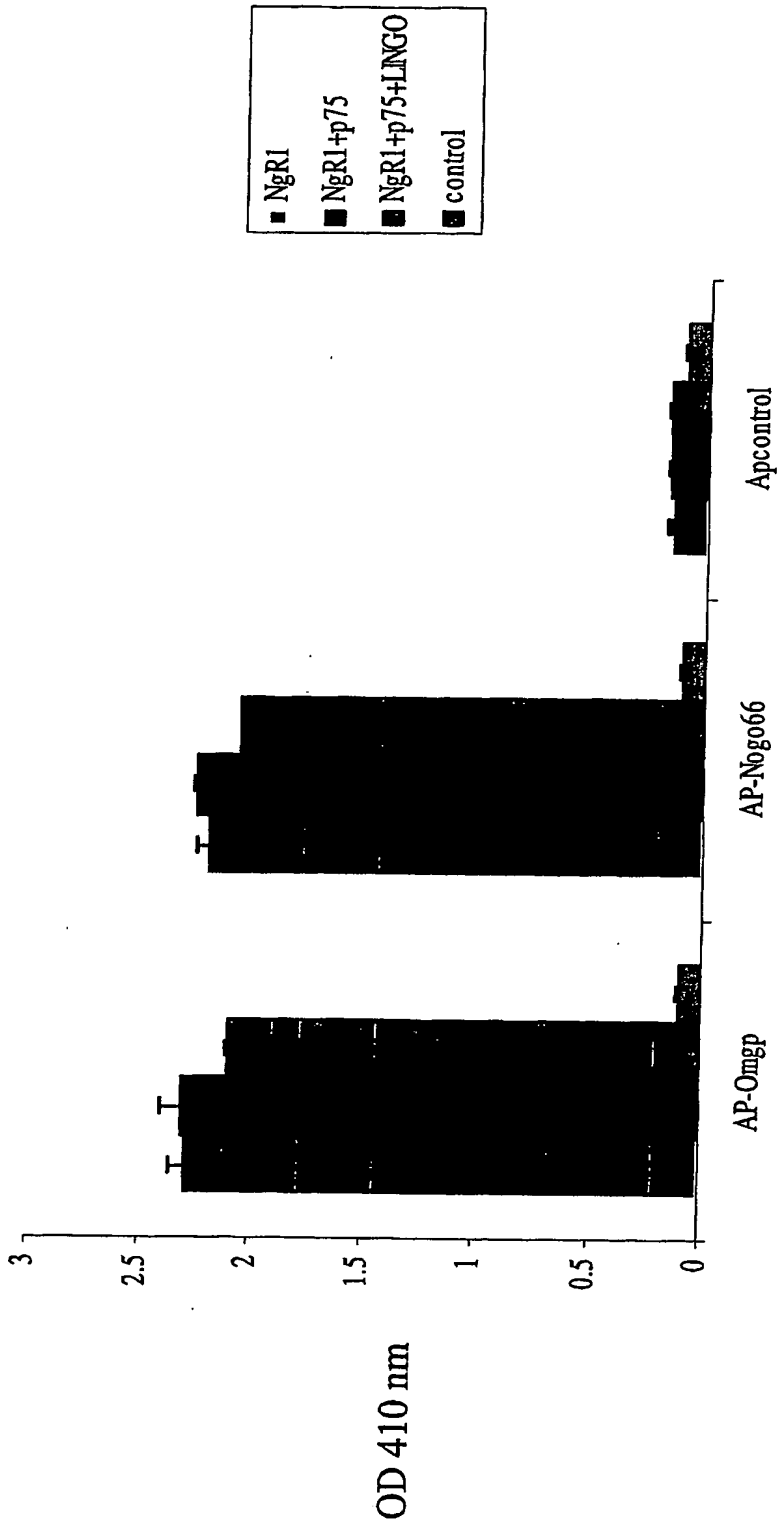

NgR1
NgR1+p75
NgR1+p75+LINGO
control
OD 410 nm
3
2.5
2
1.5
1
0.5
0
AP-Omgp
AP-Nogo66
Apcontrol

FIG. 6

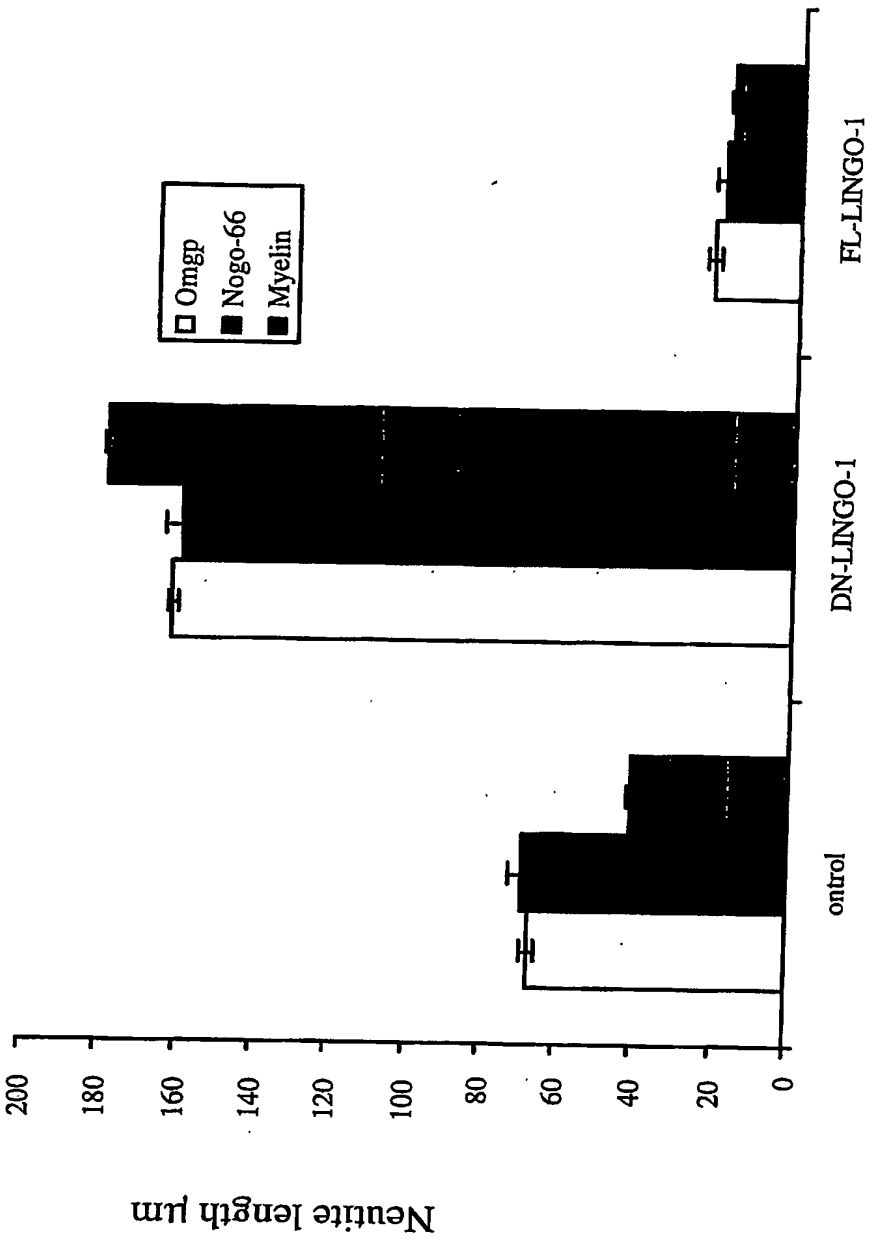

Omgp
Nogo-66
Myelin
Neutite length µm
200
180
160
140
120
100
80
60
40
20
0
ontrol
DN-LINGO-1
FL-LINGO-1

FIG. 7

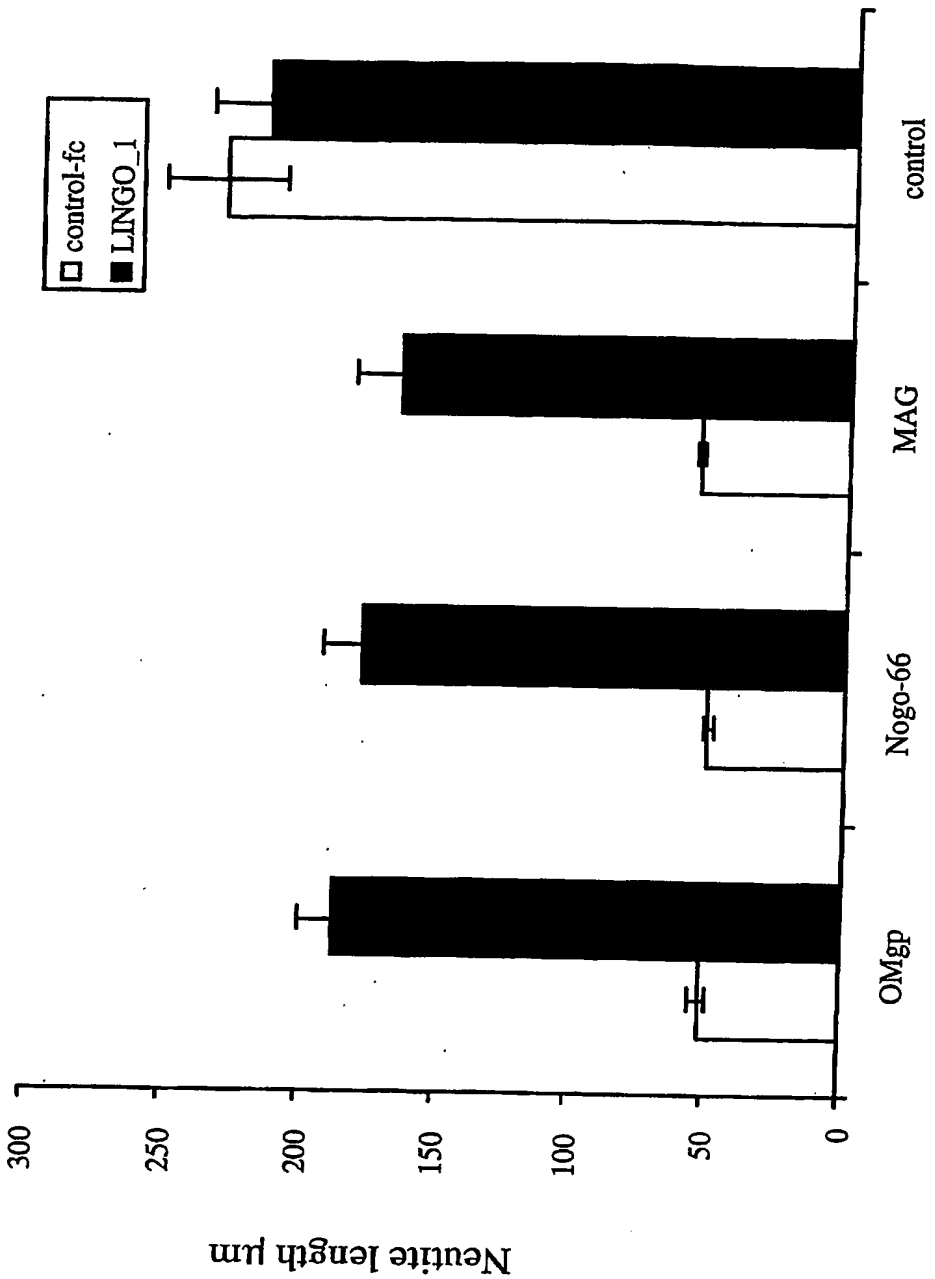

control-fc
LINGO_1
Neutite length µm
300
250
200
150
100
50
0
OMgp
Nogo-66
MAG
control

FIG. 9

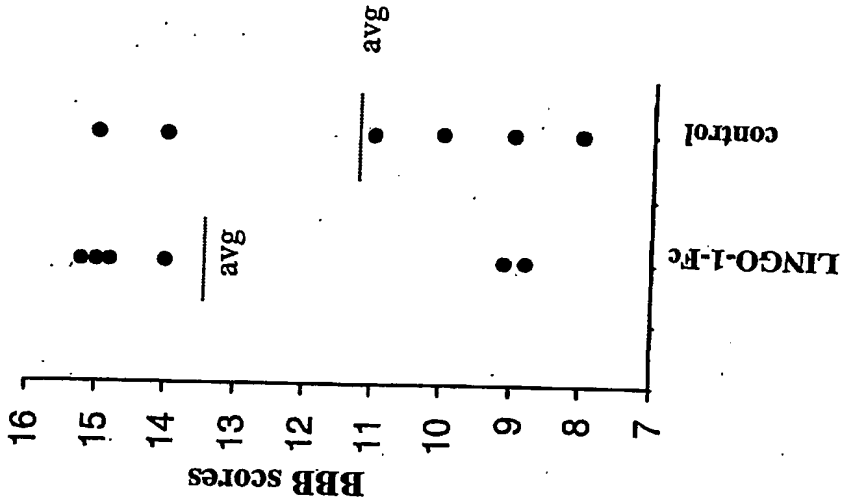
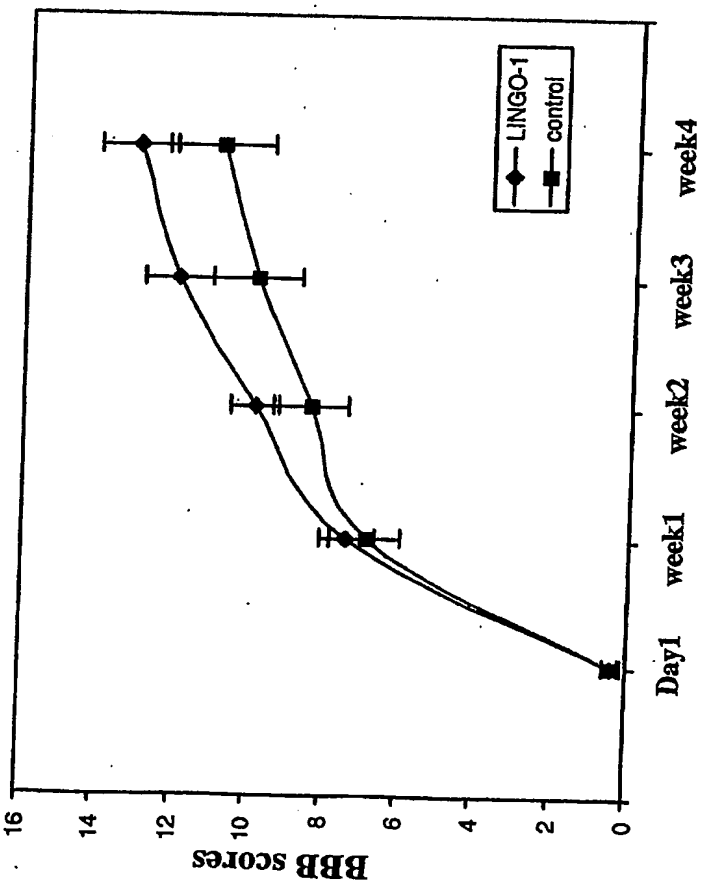

BBB scores
16
15
14
13
12
11
10
9
8
7
avg
avg
LINGO-1-Fc
control

FIG. 8


BBB scores
16
14
12
10
8
6
4
2
0
LINGO-1
control
Day1
week1
week2
week3
week4